

Successful Strategies for Diesel Emission Reduction

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plan. design. build. operate. secure.

Implementation of Diesel Emission Strategies

Where We Are:

Fuel: ULSD 15 ppm sulfur diesel fuel from companies who

- Have the ability to provide fuel delivery in quantity, quality, and when needed
- Have an adequate supply of fuel trucks with radio communication
- Have fuel trucks that are fire department approved
- **Have fuel trucks equipped with an automated system using barcode to identify and report by individual machine, date, time, and quantity**
- Have fuel trucks equipped with a metering device
- **Have the ability to generate weekly or monthly reports**
- Are MWLBE or in the process of obtaining MWLBE status

Implementation of Diesel Emission Strategies

Where We Are:

Engine: EPA tier rated for 50 to 600 hp as

<u>tier</u>	<u>year</u>	<u>pm</u>
1	1996 to 2003	0.40 g/hp-hr
2	2001 to 2007	0.15 g/hp-hr
3	2006 to 2012	0.15 g/hp-hr
4	2008 to 2013	0.01 g/hp-hr

Implementation of Diesel Emission Strategies

Where We Are:

Retrofit Technology:

Diesel Particulate Filter EPA or CARB or VERT verified

Regeneration

- automatically by machine
- assisted on machine (fuel burn or electric)
- externally assisted on machine (electric)
- removed, replaced, remote regeneration

Warning device

- **backpressure monitor & warning lights**

Retrofit Manufacturers

- can provide product & service

Implementation of Diesel Emission Strategies

Where We Are

Installation

- Improving

Operator Training

- Needs Training
- Understand & practice no idle rule
- Understand significance of monitoring & warning lights
- Communicate when warning light appears

Target: Tier 4 PM level on all machines \geq 50 hp

Implementation of Diesel Emission Strategies

Critical Success Factors

Executive Engagement and Organizational Alignment

- Visible and consistent support
- Vertical alignment within the organization
- Horizontal alignment within the organization

Communications

- Creation and communication of a plan to support the program
- Align strategy, process and people – synchronized to the requirements

Implementable Specification

- Objective, clear, concise, without ambiguity and conflict
- DPF Technology is available
- Products are verified by the EPA or CARB or VERT
- Reporting systems are clearly stated

Implementation of Diesel Emission Strategies

Force Field Analysis

- Driving forces ▶▶
- Restraining forces ◀◀
- Strengths & Weakness rating ↑↓
- Action plan to strengthen driving forces and weaken restraining forces

Implementation of Diesel Emission Strategies

Driving Force Strength	Driving Forces	Restraining Forces	Restraining Force Strength
	Non Attainment Area ►		
	Community Demand ►		
	FEIS Mandate ►		
	Executive Mandate ►		
6	Contract Specification ►	◄ Confusing Specifications	6
		◄ Laws apply to City Contracts & not to Equipment	5
		◄ Lack of Understanding (Contractor)	4
		◄ Lack of Attention to Detail (Contractor)	4
		◄ Lack of Seriousness (Contractor)	4
		◄ Lack of Training-operator	4
		◄ Lack of Enforcement	6
		◄ Non available technology	5
6	CHANGE ►	◄ NO CHANGE	38

Implementation of Diesel Emission Strategies

Driving Force Strength	Driving Forces	Restraining Forces	Restraining Force Strength
1	Non Attainment Area ►		
1	Community Demand ►		
1	FEIS Mandate ►		
1	Executive Mandate ►		
6	Contract Specification ►	◄ Confusing Specifications	1
5	Bid Package Review with Bidders ►	◄ Laws apply to City Contracts & not to Equipment	1
5	Pre Award Review ►	◄ Lack of Understanding (Contractor)	2
2	Inventory Submission Prior to Site Deployment ►	◄ Lack of Attention to Detail (Contractor)	2
3	Inventory Approval Prior to Site Deployment ►	◄ Lack of Seriousness (Contractor)	2
		◄ Lack of Training (Operator)	4
		◄ Lack of Enforcement	2
		◄ Non available technology	3
25	CHANGE ►	◄ NO CHANGE	17

Implementation of Diesel Emission Strategies

Driving Force Strength	Driving Forces	Restraining Forces	Restraining Force Strength
1	Non Attainment Area ►		
1	Community Demand ►		
1	FEIS Mandate ►		
1	Executive Mandate ►		
6	Contract Specification ►	◄Confusing Specifications	1
5	Bid Package Review with Bidders ►	◄Laws apply to City Contracts & not to Equipment	1
5	Pre Award Review ►	◄Lack of Understanding (Contractor)	2
5	Inventory Submission Prior to Site Deployment ►	◄Lack of Attention to Detail (Contractor)	2
5	Inventory Approval Prior to Site Deployment ►	◄Lack of Seriousness (Contractor)	2
5	Site Deployment Verification ►	◄Lack of Training (Operator)	2
6	Enforcement ►	◄Lack of Enforcement	1
		◄Non available technology	3
41	CHANGE ►	◄NO CHANGE	14

Implementation of Diesel Emission Strategies

To be successful

- **Apply CSF & FFA**
- **Construct a Strong Specification**
- **Create Organizational Alignment**
- **Manage Physical Flow of Equipment**
- **Manage Information Flow**

Implementation of Diesel Emission Strategies

To be successful

- Have conviction and be passionate.
- Walk the site, be seen.
- Know your equipment.
- Know what is available.
- Know sources for information.
- Know people who know.
- Let the contractor know you are a resource for solutions.
- Stay on top.
- Don't be afraid to fail.
- Let as many people on the project know what is required.
- Let construction folks know and feel the difference.
- Use a sticker on the machine to communicate compliance.
- Use a fuel bar code sticker to automate fuel reporting.

Implementation of Diesel Emission Strategies

Q&A ?